

BRITISH COLUMBIA

Mountain Wonderland

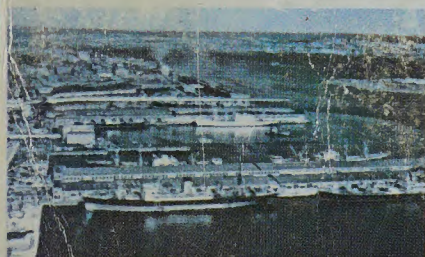
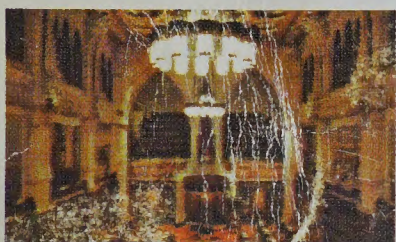
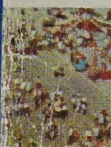
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REGIONAL STUDIES OF CANADA

BRITISH COLUMBIA

Mountain Wonderland

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and Neville V. Scarfe

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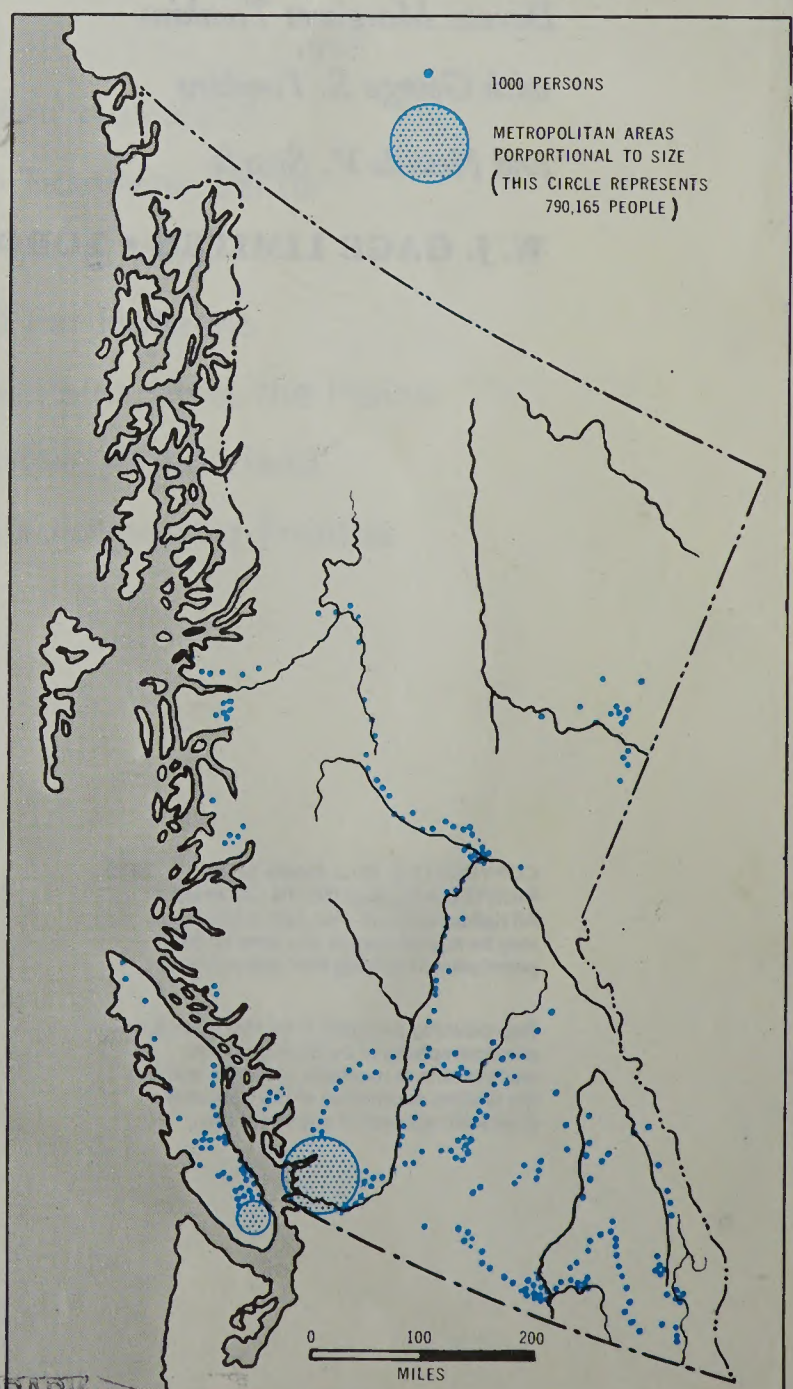
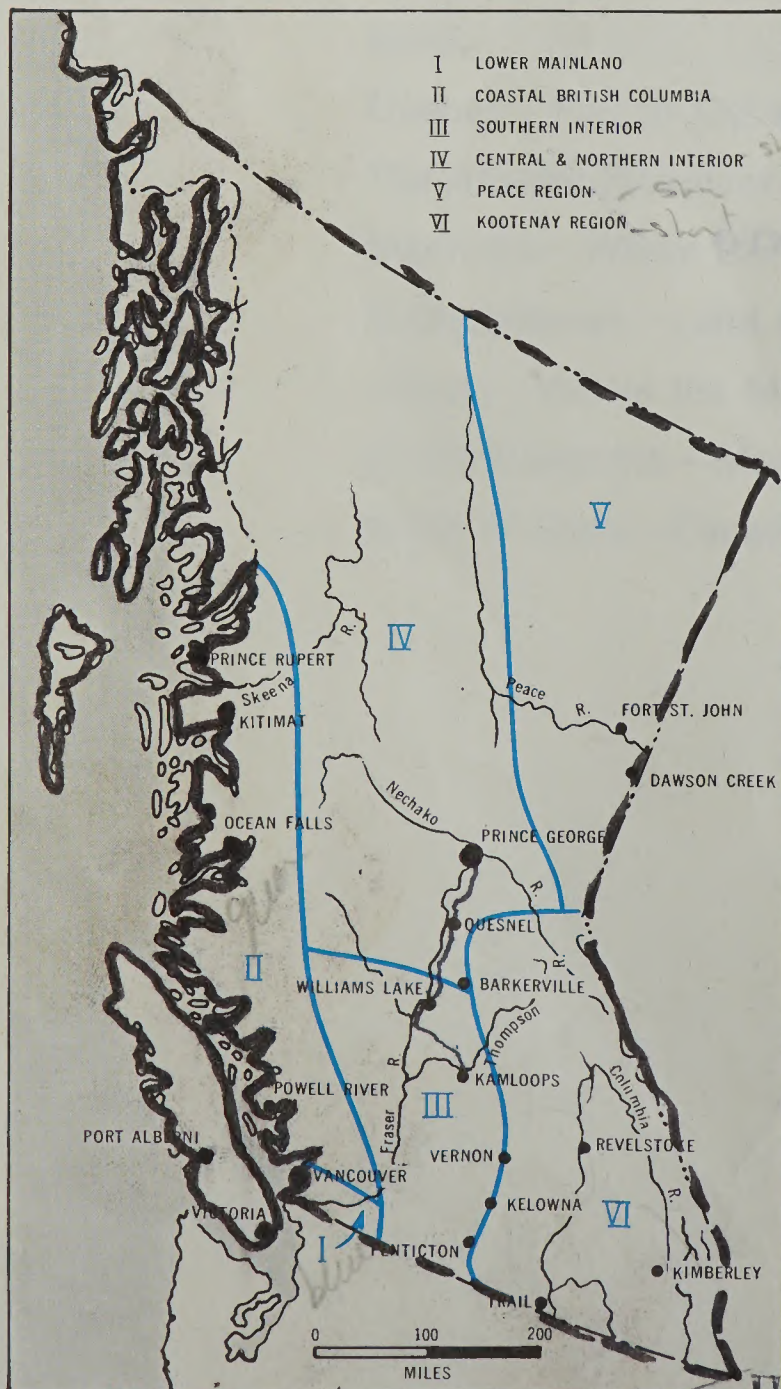
BRITISH COLUMBIA



Mountain Wonderland

Almost everyone in British Columbia lives within sight of great mountains. The mountain ranges break up a vast area into smaller regions with different physical conditions and ways of life. These regions are shown in Figure 9-1. Compare this map with the population map in Figure 9-2. In which region do most of the people of British Columbia live?

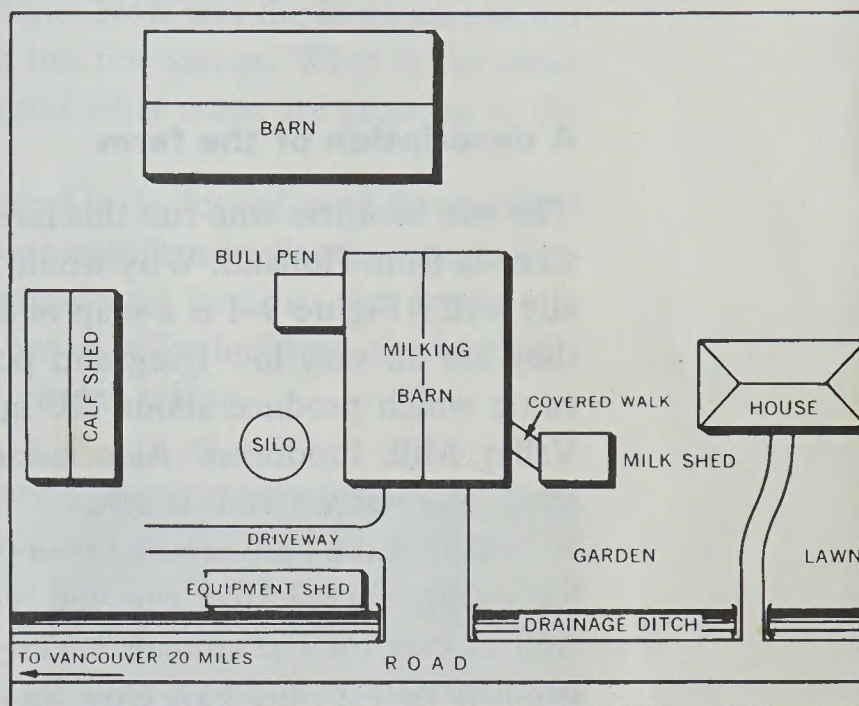
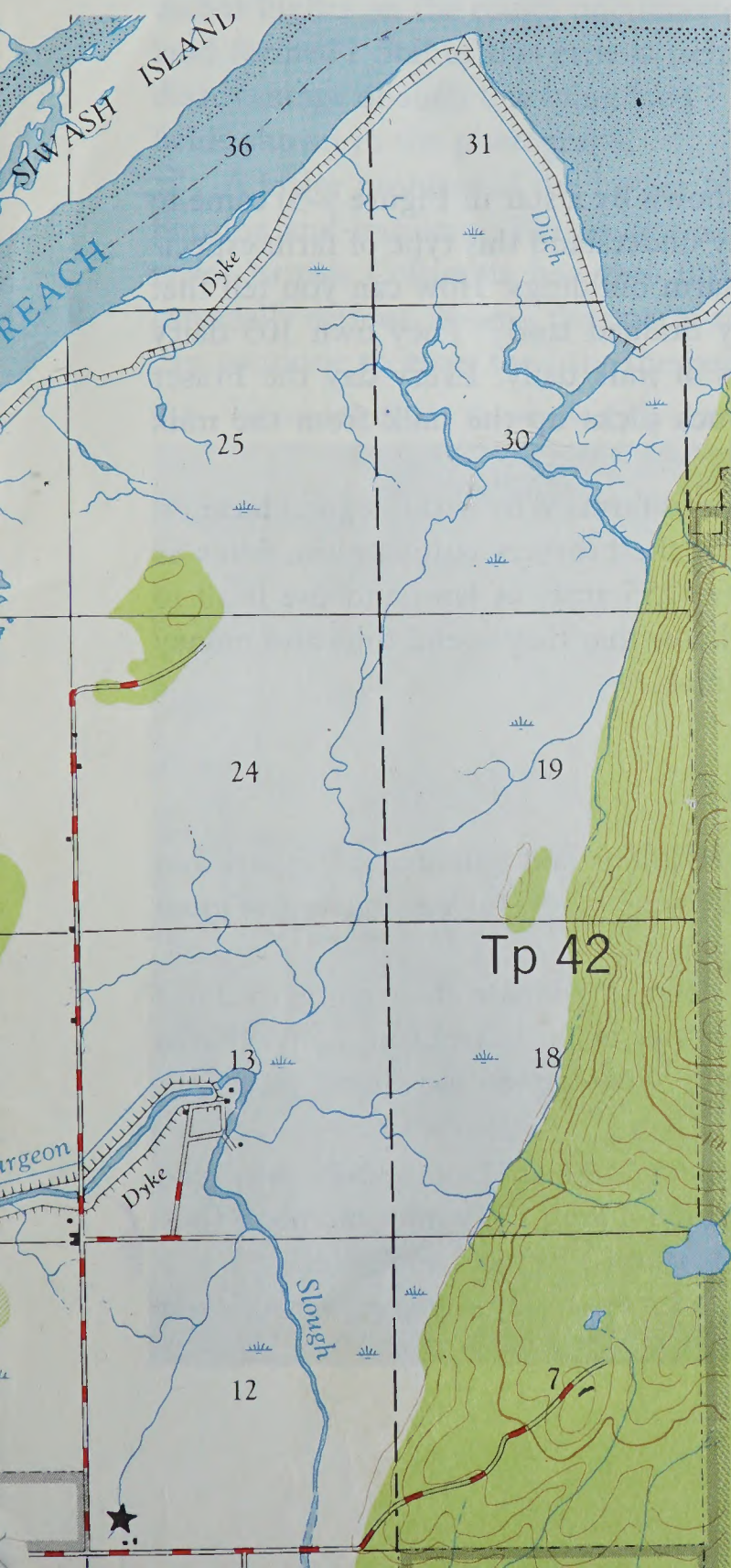
9-1. The regions of British Columbia. 9-2. Population map of British Columbia.



A visit to a dairy farm in the Lower Mainland — British Columbia's richest farmland

The Lower Mainland contains almost half of the total number of farms in British Columbia. Let us visit a farm and find out what goes on there.

The Fraser River carries large quantities of sand and mud to the sea. How does Figure 9-12 show that when the current slackens this material is deposited on the sea bed? Such deposits have built up the great *delta* of the Fraser. Figure 9-3 shows some land that was formed in this way. Name two ways in which the map shows that the land is very flat and low lying. How have the farmers tried to prevent the land from being flooded?



Here is a list of the equipment they use:

2 tractors
2 wagons
1 flat-deck truck } for transport

chopper
2 mowers
baler
rake } for haying

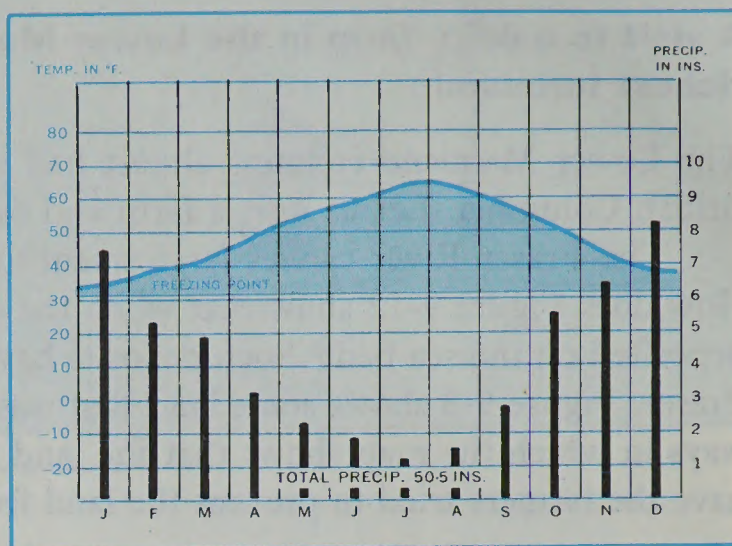
mulcher
loader
manure spreader
seed drill } for growing crops

4 milking machines
1 fan to dry hay
in loft.

9-4 (Above). A large-scale map of the buildings of a dairy farm near Vancouver.

9-3. A topographic map of part of the Fraser delta on the scale of 1:50,000, Sheet Coquitlam 92G/7 East Half, in the National Topographic Series. (Department of Mines and Technical Surveys, Ottawa).

9-5. Climatic graph of Vancouver.



A description of the farm

The two brothers who run this farm (shown by a star in Figure 9-3) came to Canada from Holland. Why would they understand this type of farm especially well? Figure 9-4 is a map of the farm buildings. How can you tell that they are on very low lying and poorly drained land? They own 105 dairy cattle which produce about 720 quarts of milk daily. Every day the Fraser Valley Milk Producers' Association truck picks up the milk from the milk shed. Suggest where it is sold.

Milk is the only product sold from this farm. Why is this a good location for a dairy farm? How can you tell that the brothers cultivate the fields as well as care for the animals? They have 255 acres of land and use it all to produce pasture and hay. How do you know that they spend time and money on producing good forage for their animals?

The climate of the Lower Mainland

1. Name two ways in which the buildings and equipment suggest that it often rains on this farm. Look at the climatic graph for Vancouver in Figure 9-5. In what season does most of the rain fall?

2. Why do some of the farmers need to sprinkle their crops in July? Dairy cattle are very common on the Fraser delta, but not all farms are as specialized as the Dutch brothers' farm. Vegetables and small fruits are widely grown.

3. Notice the average January temperature in Figure 9-5. Why can farmers leave their sugar beets in the ground during the winter months? They are harvested in spring and another crop planted in the same field.

4. How does the climate help the Fraser delta farmer have fewer expenses than an Ontario dairy farmer?

5. Choose the best word to complete the following sentences: Vancouver has (mild, cold, very cold) winters and (cool, warm, hot) summers. Most of the precipitation falls in (winter, summer).

A picture review of farming on the Fraser delta

Figure 9-6 shows farmland on the Fraser delta. The people on these farms live in one of the largest areas of flat land in British Columbia but the mountains are close by. Find two ways in which Figure 9-12 shows the sudden change where the flat land meets the mountain sides. The change is so abrupt that it is possible to stand with one foot on the flat land and the other a few inches higher on the rough uncultivated slope. How was the large area of flat land formed? Soil of this type is rich and has few stones. What is the main disadvantage of such low lying land? Suggest what crops are growing in the fields shown in the photograph.

⇒ A major problem of the Lower Mainland is the loss of good farmland to housing and industry. This is also a serious problem in Southwestern Ontario. British Columbia has very little agricultural land, so the position is especially serious. If only the poorer soils are used for building, the best soils can continue to grow food for the people of this region.

9-6. Farmlands on the Fraser delta (British Columbia Government).





9-7. View south from Brockton Point in 1884 (Vancouver City Archives).

Greater Vancouver — Milltown to Metropolis

Two pictures show Vancouver's growth — Figures 9-7 and 9-8. In Figure 9-9 locate Brockton Point. Both pictures were taken looking south from this Point. How many years apart were the two pictures taken? Describe the changes that have taken place in this scene over the years.

9-8. View south from Brockton Point in 1961 (Vancouver Sun).



Population figures also show Vancouver's tremendous growth:

1886..... 2,000

1966..... 410,375

For Greater Vancouver, the total population in 1968 was nearly 955,000 — nearly half of the people in British Columbia. Let us try to find out why Vancouver has become Canada's (a) second port and (b) third largest city.

1. Figure 9-9 shows the downtown area of Vancouver in the foreground with part of the harbor in the background.

(a) Match the photograph with the map in Figure 9-12. Which letters show Brockton Point, Burrard Inlet, Coast Mountains?

(b) What physical factors limit growth of the city on the north shore?

2. Refer back to Figure 9-5. Compare the January average temperature with that for Montreal (12°F). Why is this a major advantage for the port of Vancouver?

3. Notice that the harbor extends along both shores of Burrard Inlet. It covers an area of nearly 50 square miles and is one of the finest in the world.

9-9. A view of Vancouver (British Columbia Government).



4. Railway and road transportation:

(a) In Figure 9-12 follow the routes by which the Canadian Pacific and Canadian National Railways reach Vancouver. These transcontinental lines connect Vancouver with all centres in eastern Canada.

(b) Trace the route of the Great Northern Railway which connects Vancouver with Seattle and other points in the United States.

(c) Follow the Pacific Great Eastern Railway which extends from North Vancouver into the interior of the province.

(d) Find Route 1 (the Trans-Canada Highway), and Route 99 which runs south to the United States.

What do these facts suggest about Vancouver?

Figure 9-10 is a copy of the ship calendar from a Vancouver newspaper. The names of piers at Vancouver and New Westminster are shown in capital letters. It also lists the owner of each vessel, its cargo, and destination. Name the cargoes being loaded on June 26, 1964. General cargo means a variety of small goods. With which continents does Vancouver trade? Vancouver is

9-10. The Ship Calendar for June 26th, 1964 (Vancouver *Sun*).

SHIP CALENDAR	
VANCOUVER HARBOR	
Arrivals: Alblasserdyk, Arimasan Maru.	
Sailings: Toshio Maru, Huntsland, Kirsten Bakke, Toho Maru, Maririta, Dimitrios, Cnosaga, Dona Alicia, Volgograd.	
ANCHOR —Ioannis Daskaleis (Gk.)	Seaboard U.K., Continent. Lumber
BALLANTYNE —Alblasserdyk (Dutch)	Royal Mail U.K. Lbr., Grn., Gen.
Oinoussios (Gk.)	North Pacific China. Grain
Seattle (Swed.)	C. G. Johnson N. Europe. General
BURRARD TERMINALS —Kiyo Maru (Jap.)	Kingsley Japan. Discharge
Captain Tieo (Lib.)	Empire Japan. Oil Seed
CPR A-2 —Durban Maru (Jap.)	C. G. Johnson Japan. Pulp, General
CPR B —Barranduna (Swed.)	Empire Australia. General
CPR 7 —Erevan (U.S.S.R.)	Empire U.S.S.R. Flour
LAPORTE —Pacific Stronghold (Br.)	Furness Withy U.K. Gen., Lbr., Grn.
Procyon (Gk.)	Greer-Tidewater U.S., Atlantic. Lumber
LYNN TERMINALS —Concordia (Lib.)	Pacific Export U.K. Tubes, Lumber
Brevik (Nor.)	Seaboard U.S., Atlantic. Lumber
POOL —Sydland (Swed.)	North Pacific South Africa. Grain
Chloe (Gk.)	Dodwell India. Grain
TERMINAL —Halsworthy Beacon (Br.)	J. Walton Caribbean. General
UGG —Tai Chung (China)	Empire Formosa. Grain, Pulp
Aralizz (Swed.)	Canadian Shipping South Africa. Grain
VANCOUVER WHARVES —Yamahime Maru (Jap.)	N. Pacific Japan. General
Ioannis K (Gk.)	Anglo-Canadian U.K. Lumber, General
Meltemi (Gk.)	Anglo-Canadian U.K. Lumber, General
Arimasan Maru (Jap.)	C. G. Johnson Japan. Potash
NEW WESTMINSTER HARBOR	
Arrival: Prinsdal. Sailings: Bartenstein, California Star, Jag Jiwan.	
ELEVATOR —Prinsdal (Lib.)	Canadian Transport Japan. Lumber
FRASER SURREY —Alaska (Lib.)	Courtenay Alaska. General

now Canada's leading grain port, having surpassed Montreal as a result of huge wheat sales to China and Japan. Where does the grain come from? Port facilities include piers and wharves, grain elevators, drydocks for repairs, and passenger terminals for extensive ferry services.

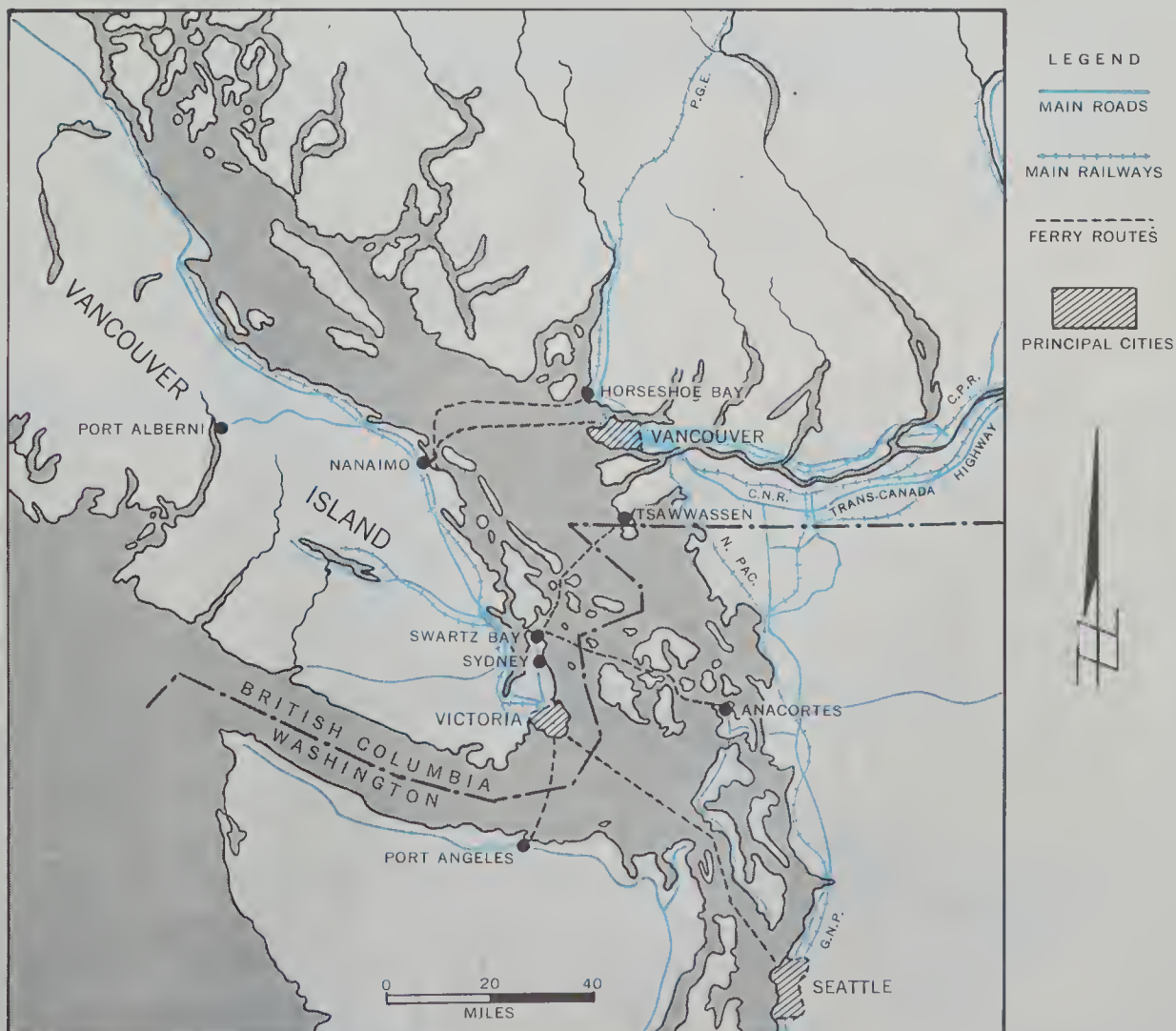
Most Vancouver industries consist of first-stage processing — that is, they are based on simple processing of raw materials. Oil refining, sawmilling, and canning are important examples. For which type of canned fish export is British Columbia famous?

Make a list of the variety of recreational facilities shown in Figure 9-12. A pleasant summer climate and many cultural attractions bring tourists to the city each year.

Topics for discussion

1. Suggest answers for the major questions posed on page 7.
2. Which features make the Lower Mainland a distinct region? In Figure 9-12 compare the delta area in the southern half of the map with the

9-11. Victoria's links with the mainland of North America.







9-13. The ferry boat passes through the Gulf Islands on its way to Victoria (British Columbia Government).

part of the Coast Mountains shown in the northern half. Describe relief, vegetation, transportation, and settlement in each area.

An excursion to Victoria

Every day hundreds of cars and thousands of people travel the ferries between Vancouver and Victoria. Some travel on business, for Victoria is the provincial capital and an important industrial and maritime city. Many others travel for pleasure. A cruise on modern vessels through fine coastal scenery has become a noted tourist attraction. Others want to visit Victoria because it is considered one of Canada's most beautiful cities, with its famous gardens, parks, and beaches. Many visitors like to buy English imports such as china and woollens.

How many ferry routes are shown between Vancouver and Victoria in Figure 9-11? Most people choose to travel the quickest way via Tsawwassen and Swartz Bay. They drive to the ferry dock at Tsawwassen along a modern divided highway. The last part is along a jetty built far out into the water. Figure 9-13 is a picture of one of the shining white ferry boats. Cars are driven right into the car deck. Dozens of vehicles are packed in, including the Vancouver-Victoria bus and huge trailer trucks. Within a few minutes the vessel pulls away. Some people eat in the fine restaurant, other rent cabins and rest, but most people stay on deck for the boat travels through the beautiful Gulf Islands. The voyage is soon over, and the cars pull quickly away from the boat for the short journey to Victoria. They travel through beautiful farmland. Southeastern Vancouver Island is an area of mixed farming similar to the Lower Mainland. Mild winters and early springs make it possible to grow early fruits, vegetables, and flowers which are shipped all over Canada.



9-14. A large-scale map of Victoria.

9-15. An aerial photograph of Victoria (British Columbia Government).



Victoria is an important city

1. Figures 9-14 and 9-15 comprise a large-scale map and a photograph of Victoria.

(a) Find the road by which travellers from the ferry dock at Swartz Bay enter Victoria.

(b) What letters on the photograph mark the Parliament buildings, harbor area, log booms, oil storage tanks?

(c) What industries and functions are suggested by the map and photograph?

(d) What is the special function of Esquimalt?

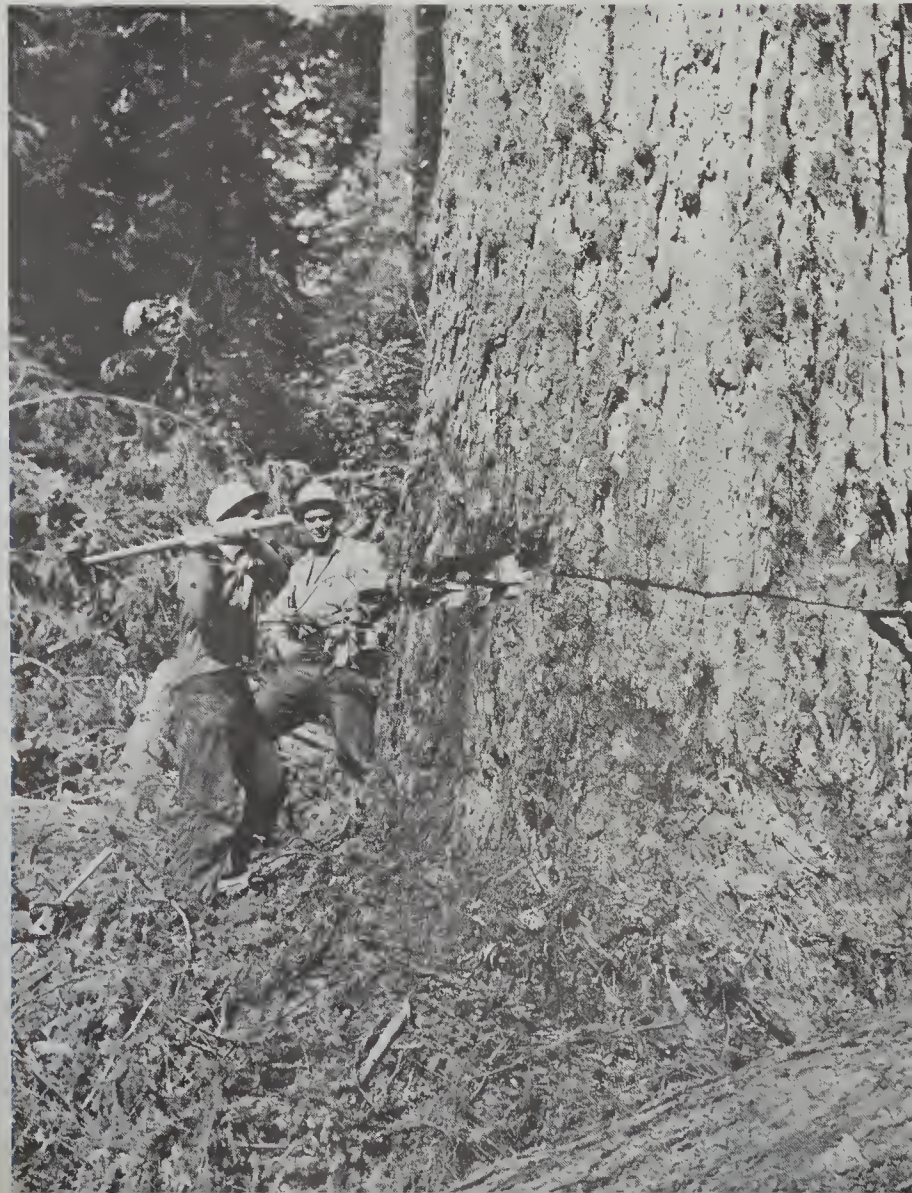
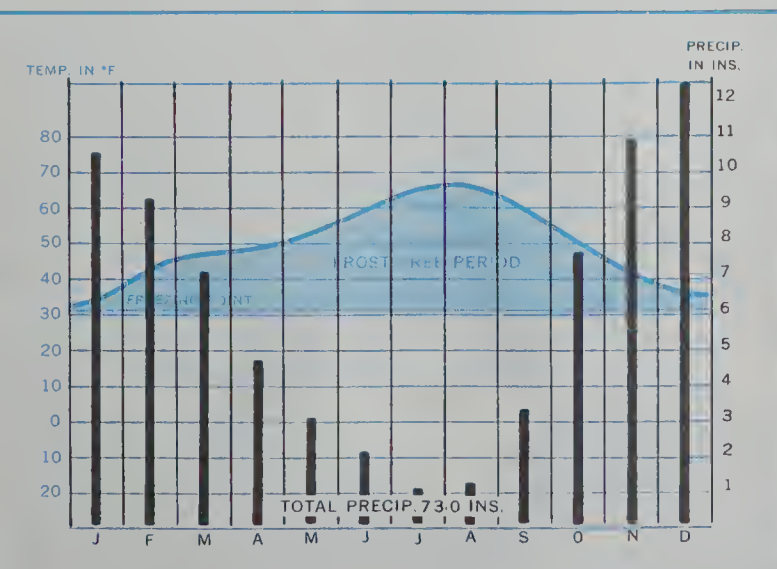
2. Victoria has a mild climate and is sunnier and drier than Vancouver. Suggest why many retired people like to live in Victoria.

The wealth of the rain forest

The mountains of Vancouver Island rise suddenly from the east coast lowland. Their slopes are covered by some of the richest forests in the world. Look at the climate graph for Port Alberni in Figure 9-16. Why is this climate favorable to the growth of huge trees? Compare the size of the tree in Figure 9-17 with the size of the people. One Douglas Fir of this type contains enough lumber to build five large bungalows.

9-17 (Opposite). Felling a Douglas Fir near Port Alberni (British Columbia Government).

9-16. A climatic graph of Port Alberni.





9-18. Mr. Silver's truck loading a Douglas Fir.

9-19. A view of Port Alberni—the Silvers' home town (George Allen Aerial Photos Ltd.).



The life of a logging truck driver

Mr. Silver drives a truck like that in Figure 9-18. Some of the slopes are very steep and the roads are often muddy, so his job is difficult and dangerous. After the trees have been felled by a power saw like that shown in Figure 9-17, they are loaded into Mr. Silver's truck. He drives to the nearest water where he dumps them. Later they are sorted according to species and quality, and for use in the mills. Fire is one of the greatest hazards in forest operations and the truck carries a special tank of water for fire-fighting. Mr. Silver himself had to be trained in fire-fighting before he could drive the truck. Compare Mr. Silver's truck with the "cat train" shown in Figure 4-26. Both workers help in the production of pulp and paper. How are the trees, the type of country, the climate, and the methods of work in Vancouver Island different from those in the Canadian Shield? Why does Mr. Silver's company produce more construction lumber than the companies working on the Canadian Shield?

Mr. Silver and his family live in Port Alberni, shown in Figure 9-1. The town is almost entirely dependent on the forest industries. There are two sawmills, a shingle mill, a plywood mill, and a pulp and paper mill. Most of Mr. Silver's friends and neighbors work in the mills. Figure 9-19 is a photograph of Port Alberni. Which letters indicate the mills, log booms, piles of sawn lumber, workers' houses, forested slopes?

Deep sea vessels can reach Port Alberni via the long, deep *fiord* from the west coast. All the west coast of British Columbia has long inlets of this type. Sheltered, deep-water anchorage is a great advantage for the export of goods. Find the vessel which is loading sawn lumber in the picture. Most of the output goes to the eastern United States and to Europe.

The Silvers like living in Port Alberni. The town lies in a valley between lofty mountains and close to the ocean. They enjoy hunting, fishing, and

9-20. A sport fisherman with his catch—Vancouver Island (British Columbia Government).





9-21. "Patch logging" is used as a means of forest conservation in British Columbia (MacMillan & Bloedel Limited).

other outdoor activities. Vancouver Island is world famous for sport fishing, and catches such as that in Figure 9-20 are not unusual.

The forest industries of British Columbia

Port Alberni is one of many important centres of forest industries in coastal British Columbia. Others include Nanaimo, Victoria, Vancouver, New Westminster, Powell River, and Ocean Falls, which may be located in Figure 9-1. What advantages help make the coast forests the most productive in Canada? What natural factors make for easy and cheap transportation? The forest industries of British Columbia are considered to be among the most efficient in the world. The best quality lumber is used for making plywood. Medium quality is used for construction timber. Shingles are made from cedar. The poorest lumber goes to the pulp and paper mill, and bark and sawdust provide fuel.

Trees for tomorrow

One third of our national income is based on forest products and we must manage them wisely. Too often in the past forests have been ruined by over cutting and by fires. Trees are a crop that must be planted, cared for, and harvested. In the Alberni valley, trees are cut in patches as shown in Figure 9-21. Such patches will re-seed naturally from the surrounding trees. Growing trees are thinned to promote growth of the finest specimens. Fertilizers are sometimes applied. Insects, diseases, and weeds are combatted by spraying. Fire is the greatest hazard. Fire lookouts, fire-fighting trucks, and water bombers have been used to check fires. But since most are caused by human carelessness the best cure lies in the hands of every visitor to the woods.

THE HARVEST OF THE SEA

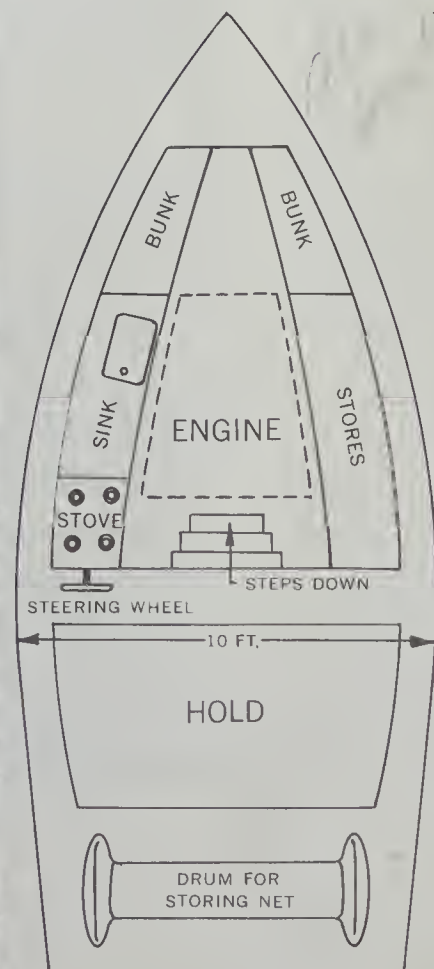
Figure 9-22 shows a part of the harbor at Prince Rupert and is a typical scene on the British Columbia coast. Why is agriculture not important here? What other rich resource do you see on the land?

Earning a living from the sea

George Wakanaki is a Japanese Canadian. He owns a fishing boat like those shown in Figure 9-22. Figure 9-23 is a plan of his boat. How can you tell that Mr. Wakanaki lives on his boat?

9-22. Fishing boats are a common sight in Prince Rupert harbor (British Columbia Government).

9-23. A plan of Mr. Wakanaki's boat.



NOVA SCOTIA	\$91,626,000
BRITISH COLUMBIA	89,872,000
NEWFOUNDLAND-LABRADOR	52,849,000
NEW BRUNSWICK	46,237,000
QUEBEC	12,881,000
PRINCE EDWARD ISLAND	9,592,000
MANITOBA	7,321,000
ONTARIO	7,202,000
SASKATCHEWAN	3,322,000
NORTHWEST TERRITORIES	1,411,000
ALBERTA	1,128,000

9-24A. Value of all products of fisheries, 1965.

In summer he lives in Prince Rupert and fishes for halibut. Every night he brings the catch home to port, from where it is shipped east in refrigerator cars. In the middle of June he unloads his halibut gear, and prepares his nets for the salmon season. The best hauls are made in late summer and fall when the fish return to spawn in the rivers where they were born.

Like most salmon fishermen, Mr. Wakanaki uses a gill net. His green nylon net has weights at the bottom and floats at the top. It is wound on the huge drum in the stern of his boat. When the fish start to swim up the Skeena River to spawn, he stretches his net across the river so that the fish are caught by their gills. Some fishermen use purse seines to catch the fish. Trollers are used to catch the species which will take the bait. Find the trollers in Figure 9-22. These boats have tall upright poles with lines attached on each side. When the boat is fishing these poles are lowered to a horizontal position and lines stretched down for 180 feet or more.

Mr. Wakanaki keeps his salmon in the hold until the packer comes to collect them. The packer takes them to the cannery from where they are shipped all over the world.

In October he stows his gear and moves south to Steveston. Find Steveston in Figure 9-12. Mr. Wakanaki does no fishing in the winter but may find other jobs.

Salmon and halibut are the most valuable catches on the Pacific coast, but cod, sole, and herring are also important. Large quantities of salmon are canned, and fresh, frozen, and cured forms of the various species of fish are also sold. Much of the herring catch is now converted to oil for paints,

soaps, and other commercial uses. Some of the fishmeal is used for stockfood supplements and in fertilizers.

Conserving a valuable resource

How does Figure 9-24A show that British Columbia fisheries are important to Canada? Figure 9-24B shows how important the fisheries are to British Columbia. In addition to the fishermen, many people are employed in supplying boats, buildings, and fishing equipment. Others work in various processing plants, in providing power for the factories, and in transporting and marketing the fish.

Fishing is a difficult and dangerous occupation requiring a great deal of expensive equipment. For example, a net costs from 5,000 to 15,000 dollars. Serious conservation problems have developed, and the runs are not always good. Young salmon are preyed on by many natural enemies, and are sometimes overfished if adequate controls cannot be enforced. Logging operations have in the past choked many spawning streams with logs and brush. Where the forests have been stripped bare, the trees no longer break the force of the heavy rains. Raging torrents may sweep away the spawning areas in winter, while the stream beds may become dry in summer. Industrial wastes sometimes pollute streams and kill the fish. High dams make it difficult for the salmon to swim upstream even when fish ladders are provided. Sometimes it is difficult to decide whether rivers such as the Fraser should be dammed to provide irrigation water and electric power, or whether they should be left untouched for the salmon.

Fish, like trees, must be regarded as a crop to be developed and harvested with care. Among the conservation methods being taken on the Pacific coast are the following:

1. Fish below a certain minimum size may not be taken.
2. Closed seasons are maintained during the spawning season, so that

9-24B. British Columbia Net Value of Production, 1966.

MANUFACTURING	\$3,055,500,000
FORESTRY	602,218,000
CONSTRUCTION	526,613,000
MINING	330,843,633
AGRICULTURE	190,148,000
ELECTRIC POWER	106,475,000
FURS AND FISHING	54,891,924

sufficient fish are permitted to reach the spawning grounds and assure a future supply.

3. Regulations prohibit the discharge into streams of any materials injurious to fish life.

4. Inlets to irrigation ditches must be screened, by law.

5. "Fishways" may be built around waterfalls and other obstructions.

9-25. The "Sea of Mountains" on the northwestern coast of British Columbia (R.C.A.F.).



Prince Rupert — Mr. Wakanaki's summer home

(a) Look again at Figure 9-22. What can you tell about the scenery, vegetation, and occupations in Prince Rupert?

(b) Refer to the climatic graph for Port Alberni in Figure 9-16. Conditions in Prince Rupert and all coastal centres are similar. What climatic advantages has Prince Rupert over eastern ports? Grain is exported from a large elevator, which has been doubled in size in order to handle recent large grain exports for China and Japan.

(c) For what important industry in Prince Rupert does Mr. Wakanaki supply raw material? Huge pulp and paper mills are being developed. Why is this a suitable area for such an industry? To supply the requirements of this industry a large chemical plant is also being built. Power is available from the Coast Mountains and in 1968 Prince Rupert began to receive power from the new Peace River Project.

(d) How are Mr. Wakanaki's halibut sent to their markets? Prince Rupert is the terminus of a transcontinental railway, also of a major road. No other coastal centre, except Vancouver, has such connections with the interior of the continent. Many are supplied by water communications only. What bulk products move westward into Prince Rupert for export overseas? Prince Rupert is also the terminus of the daily ferry to Alaska and expects shortly to have daily ferry service to Vancouver Island. Prince Rupert has a magnificent natural harbor. When the main terminus of the Canadian National transcontinental line was established in Vancouver, Prince Rupert did not develop as rapidly as was expected. Now it is undergoing a new period of growth. What recent events have been favorable to Prince Rupert? What are its natural advantages?

The town in the wilderness — Kitimat

Fifteen years ago only animals roamed the townsite of Kitimat on a remote inlet on the British Columbia coast. Today nearly 10,000 Canadians call this modern town their home. They moved there because a large aluminum smelter was built. A plentiful supply of cheap hydro-electricity made this an attractive site. Why are the Coast Mountains rich in power sites? Bauxite is brought in by water from British Guiana and Jamaica. By what route does it reach Kitimat? A pulp and paper mill is also being considered. What conditions would favor such a development?

North of Prince Rupert, the mountains extend as an endless wilderness to the Alaska border. Look at the photograph in Figure 9-25. Why is "sea of mountains" a good description?

COASTAL BRITISH COLUMBIA

Select the most suitable phrases to complete the following sentences.

1. The coastline is
 - low-lying and fringed with sand dunes.
 - deeply indented with high mountains on all sides.
 - flat and marshy.
2. Most of the land is
 - flat, treeless prairie.
 - heavily forested mountain slopes.
 - low hills with many lakes.
3. The climate may be summarized as
 - dry summers and very cold, wet winters.
 - mild, wet winters and warm, dry summers.
 - hot, wet summers and cold winters.
4. The chief form of vegetation is
 - very large coniferous trees.
 - mixed woodland of small trees.
 - grassland.
5. Most of the people live in
 - Vancouver Island.
 - the Coast Ranges
 - the Lower Mainland.
6. Farming is most important in
 - the Lower Mainland.
 - the Alberni Valley.
 - the Prince Rupert area.
7. The chief agricultural products are
 - wheat and other grains.
 - fruits.
 - dairy produce, vegetables.
8. The chief centres of the forest industries are
 - Alberni, Powell River, Ocean Falls, and New Westminster.
 - Kitimat and Prince Rupert.
 - Victoria and Esquimalt.

9. The most valuable fish caught are
 - lobsters.
 - cod and haddock.
 - salmon and halibut.
10. Power is obtained from
 - oil brought in by tanker.
 - local hydro-electric sites.
 - huge local coal deposits.
11. Mining is
 - the greatest source of employment.
 - relatively unimportant.
 - carried on beneath the sea.
12. Match these cities, Vancouver, Victoria, Port Alberni, and Prince Rupert with the appropriate descriptive phrase.
 - a town almost entirely based on the forest industries.
 - a fishing port and route centre which is developing new functions and industries.
 - Canada's third largest city — a great port with varied industries.
 - the provincial capital of British Columbia — an industrial city and port with special naval functions.

THE SOUTHERN INTERIOR

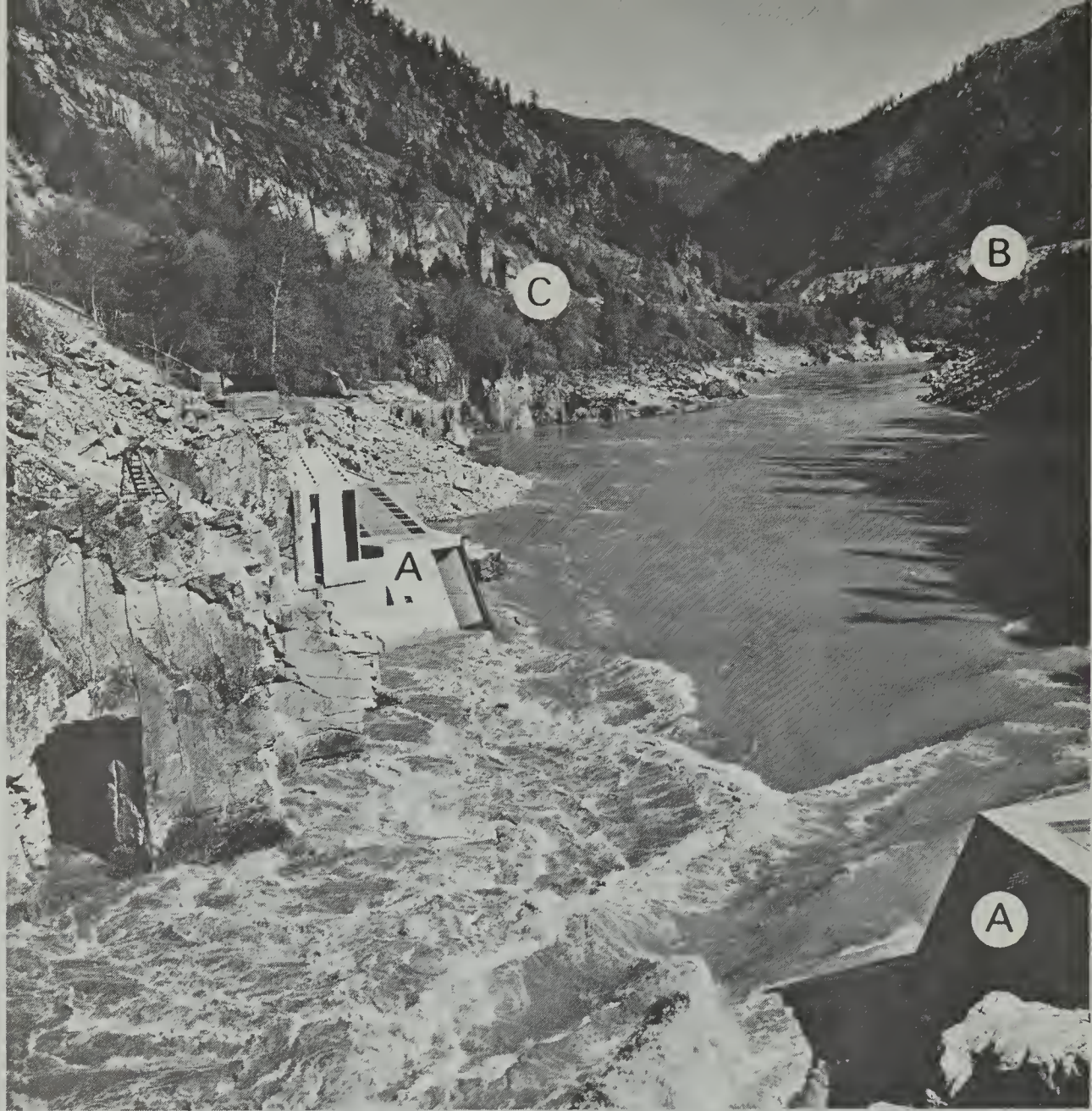
The Fraser Canyon

I have been for a long period among the Rocky Mountains, but have never seen anything equal to this country, for I cannot find words to describe our situation at times. We had to pass where no human being should venture. We had to ascend precipices by means of ladders composed of two long poles placed upright and parallel with sticks crossways tied with twigs. *

This is how Simon Fraser, the first white man to explore this area, described Hell's Gate in his journal written in 1808. Figure 9-26 shows how it looks today.

Why did Fraser have to leave his canoes and attempt to climb the cliffs? The water at this point is so rough that fishways have been built to help the

*This extract from Fraser's Journal is quoted from *Simon Fraser, Letters and Journals 1806-1808*, edited by W. Kaye Lamb and published by the Macmillan Co. of Canada Ltd., Toronto, as one of their series of Pioneer Books (1960). Permission of the publishers to quote this material is gratefully acknowledged.



9-26. The Fraser Canyon (National Film Board).

salmon pass upstream. Which letter indicates the fishways? Today, two railways and part of the Trans-Canada Highway pass along the canyon. Which letters mark these routes? Why were they difficult and expensive to build? Every year these routes are blocked by landslides for short periods. In spite of the difficulties this is still the main route through the Coast Ranges to the Pacific.

From rain forest to desert in 200 miles

Compare this information about the weather in Port Alberni and Kamloops. Locate these towns in Figure 9-1.

	<i>Port Alberni</i>	<i>Kamloops</i>
Annual precipitation	72 inches	10 inches
January average temperature	34°	22°
July average temperature	64°	70°

Complete this statement:

Port Alberni has.....times as much rain as Kamloops. Temperatures in Kamloops are.....in winter and.....in summer than Port Alberni.

By the time the air masses which tend to move in from the Pacific reach the interior of British Columbia, they have lost most of their moisture and the interior side of the mountains is very dry. How can you tell that the country in Figure 9-27 receives only a low rainfall? Many areas are even drier, and so scrubby bushes, sagebrush, and cacti form the only natural vegetation.

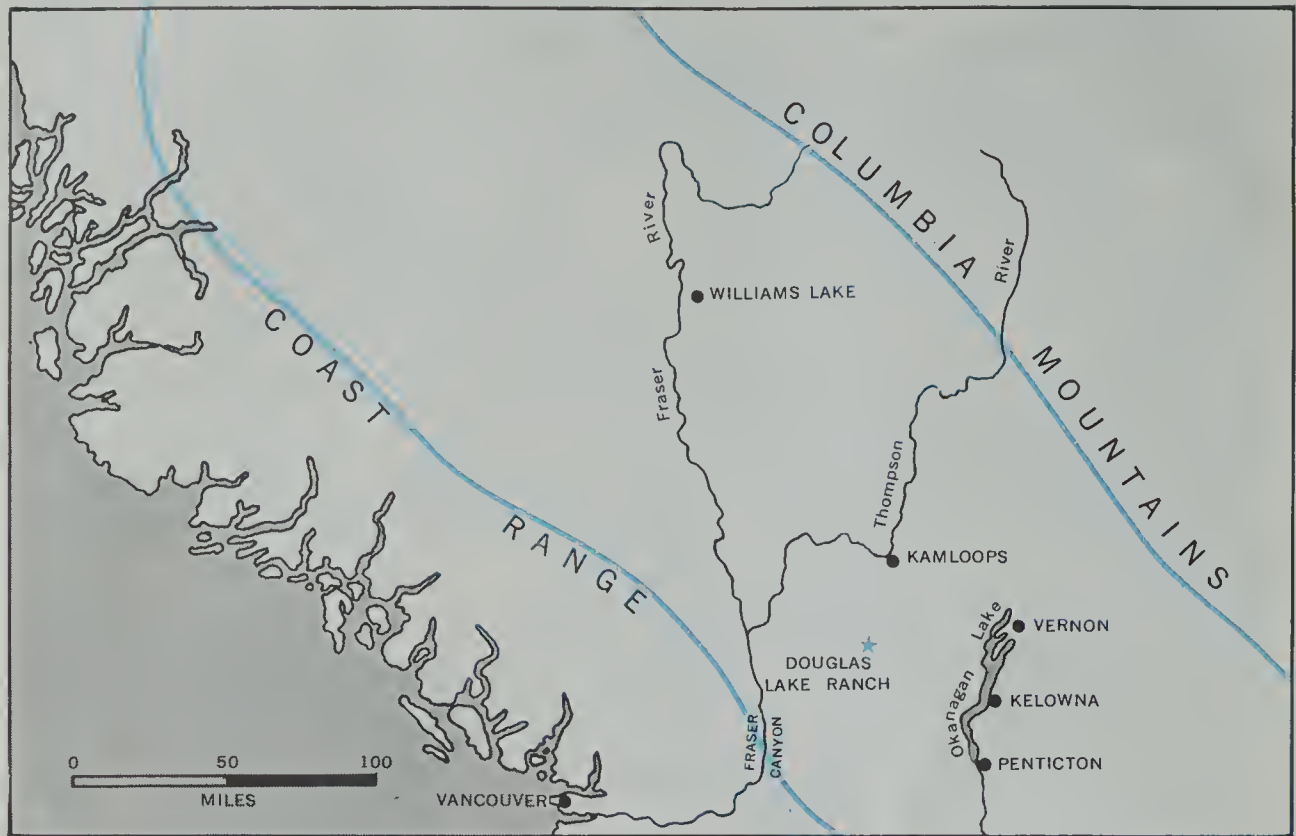
The search for gold brought the first settlers to the interior. Many were disappointed, but the demand for food and shelter by the mining towns caused others to raise crops and livestock and to cut trees for building purposes. Ranching, farming, and logging have remained the chief occupations until the present day.

The cowboys of the 1960's

Cowboys are a common sight in the southern interior. Sometimes they are driving trucks, but often they are mounted on their horses, wearing wide brimmed hats and carrying a lasso at the ready. There are many small ranches where the owner tends his own stock, but two of the largest ranches in the world — the Gang Ranch and Douglas Lake Ranch — are located in

9-27. Sheep grazing near Kamloops (British Columbia Government).





9-28. A map of the Southern Interior.

this area. Find the Douglas Lake Ranch in Figure 9-28 and look at the picture of it in Figure 9-29. Ninety cowboys work permanently on this ranch. They live in the white bunkhouses shown by the lake. In spring they mount their horses and drive the cattle to the summer range high on the hillsides. The cowboys leave a supply of salt and the cattle graze unattended all summer. But the men are not idle. They cultivate hay for winter feed. By the time the harvest is in, it is time to prepare for the roundup. The cowboys ride out over the range and bring the cattle to the lower ground for the winter. Sometimes

9-29. The home on the range—Douglas Lake ranch (British Columbia Government).



they must sleep in the open and take their meals from a chuckwagon — which is a wagon containing groceries and a cooking stove.

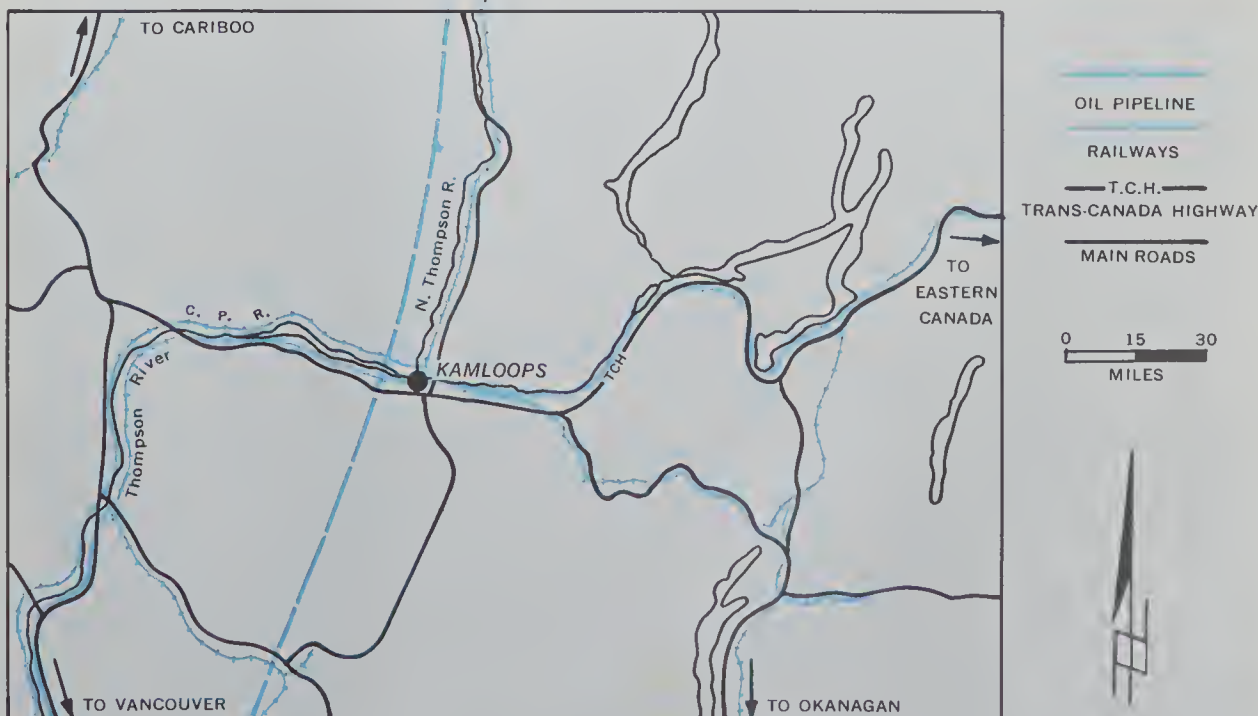
All the animals are sorted. Some are sold, diseased or weak animals are treated, new calves are branded, and a check of the whole herd is made. During the winter the animals remain outdoors but the grazing is supplemented by hay. Why can animals in the Kamloops area remain outdoors all year? Why must the farmer in Ontario feed his animals indoors in winter? These cattle are raised for beef. Suggest reasons why it is not profitable to keep dairy cattle in the Southern Interior. Sheep are raised for both meat and wool but are not as important as cattle.

Kamloops is an important centre

To hundreds of people who live on the lonely ranches of the southern interior, “going into town” means a trip to Kamloops. They may have to travel as much as two hundred and fifty miles. Ranchers can buy gas and groceries in their local villages, but when father has to buy a new car, or grandpa wants to make his will, it is necessary to visit a larger centre which provides services not available in small villages. Such places are known as *regional capitals* because they provide services for a very large area as well as their own local district.

Kamloops has very good transportation facilities as shown in Figures 9-30 and 9-31. Count the number of main roads that lead to Kamloops. Kamloops was once an Indian settlement and later a fort and trading post of the Hudson’s Bay Company. How do you think the Indians and early settlers

9-30. “All roads lead to Kamloops.”



arrived at Kamloops? Name two forms of transportation that follow the Thompson valley. Why do many transcontinental travellers pass through this city?

How can you tell that the slopes surrounding Kamloops receive much less precipitation than those of coastal British Columbia? Locate the irrigated fields and pastures along the flat valley floor.

Find the small sawmill on the river bank. Suggest why this is a good site for a sawmill.

An interesting exercise

Write a paragraph summarizing the various ways in which the Thompson River is important to the city of Kamloops.

The Okanagan Valley — the fruit belt of Western Canada

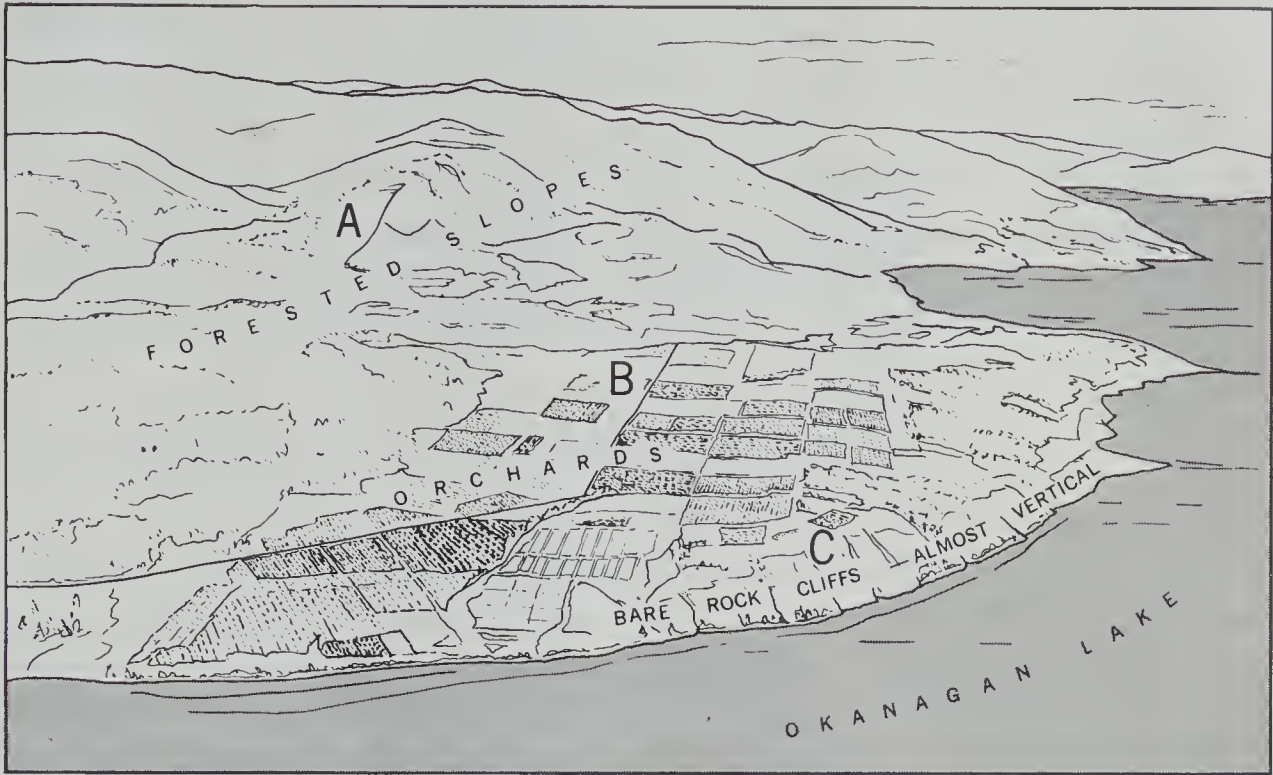
1. Find Okanagan Lake in the map in Figure 9-28. This valley is world famous as one of Canada's largest fruit growing regions. Where are the others?

2. What climatic characteristic of this area is favorable to fruit production? What would be the most serious disadvantage? The hot, sunny summer days are excellent for fruit growing but water must be supplied by irrigation. Small dams, channels, wooden flumes, aluminum pipes, and sprinkler systems are very noticeable in the Okanagan orchards.

3. Look at the sketch of part of the Okanagan Valley in Figure 9-32. Why is the land labelled "B" most suitable for orchards? These level stretches

9-31. The City of Kamloops (British Columbia Government).





9-32. -A bird's-eye view of part of the Okanagan valley.

between the steep cliffs and the rough mountainsides are known as *benches*, and the agricultural land is largely confined to these areas.

4. Figure 9-33 shows a farm on the benchland in the Valley. Which letters represent a young peach orchard, older fruit trees, rough mountain slopes?

5. The white spots are small paper cones placed over young tomato plants in early spring. Suggest why these are necessary. Spring frosts can

9-33. Springtime on an Okanagan fruit farm (British Columbia Government).



JAN.		
FEB.		
MAR.	PRUNING SPRAYING	} PREPARING
APR.	FERTILISING PLANTING NEW TREES IRRIGATION WATER RELEASED FROM MAIN DAM	
MAY	SMUDGING IRRIGATING	} TENDING THE CROP
JUNE	THINNING CHERRIES	
JULY	APRICOTS	} HARVESTING
AUG.	PEACHES PEARS PLUMS	
SEPT.	APPLES IRRIGATION WATER TURNED OFF	
OCT.	REPAIRING EQUIPMENT, PUTTING IT AWAY	
NOV.		
DEC.		

9-34. The year's work on an Okanagan fruit farm.

ruin early vegetables or an entire fruit crop. Some orchards have rows of small oil stoves between the trees. If frost is expected the farmer can light these and so save his crop. This is called *smudging*.

6. Figure 9-34 shows what work a farmer does each year.

- How does he prepare his orchards in spring?
- For how many weeks does he use his irrigation system?
- List the varieties of fruit which are grown.
- When is the best time for Okanagan fruit farmers to take a vacation?

The fruit is sold in fresh, frozen, and canned forms. About half is marketed in western Canada and the remainder is sold all over the world.

Its fine scenery and pleasant climate have made the Okanagan a large tourist centre. Penticton, Kelowna, and Vernon provide all the regional services for the area. Fruit packing, processing, and distributing are major industries in all these towns.

Hundreds of small sawmills

Small sawmills such as that shown in Figure 9-35 are very common in the Southern Interior. Within a 75 mile radius of Vernon alone there are 112 such

mills. Imagine you are watching this scene. Describe the course of a plank of lumber from the time the tree is cut until it leaves the mill on a railway flatcar. Contrast this with the enormous plants on the coast. Why do the interior mills not need large plants and special equipment? The hillsides are covered with small trees. Which letter indicates these in Figure 9-33? Though the mills are small, logging provides more income than agriculture and so production is constantly increasing.

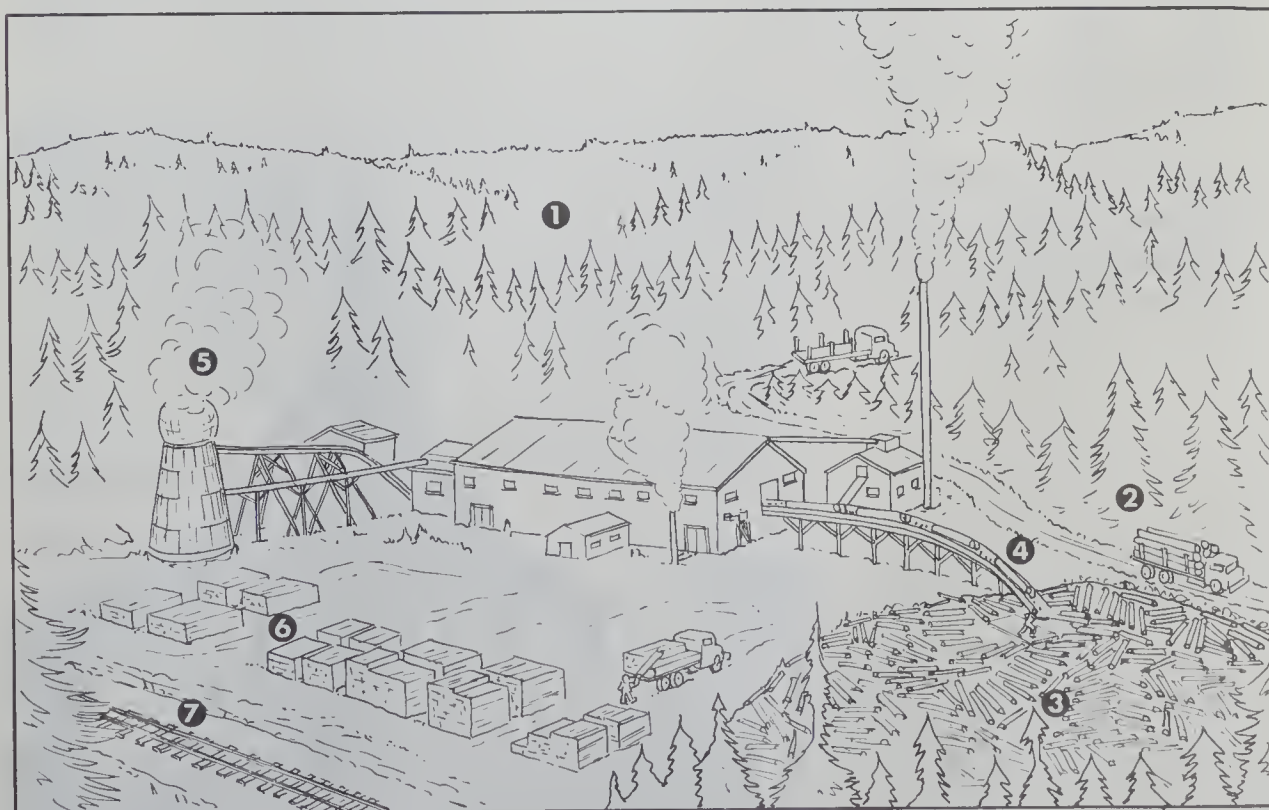
A backward glance at the Southern Interior

Most of the Southern Interior is unpopulated. It is lovely mountainous country covered by rough grass with forest on the higher slopes. Precipitation is low and summer temperatures are high. Expensive irrigation systems are necessary if crops are to be grown. What are the main forms of farming in the region? Logging and sawmilling are the chief sources of income. Tourism has become increasingly important, especially since this area became easily accessible by road from Alberta. Why do tourists like to visit this area?

The Central and Northern Interior

North of Williams Lake the interior of British Columbia becomes lower and rolling rather than mountainous. Winters are longer and more severe and the

9-35. Watching a small sawmill at work near Vernon. 1—Trees are felled on the hillsides; 2—Logs are carried to the mill by truck; 3—Logs are dumped in small pool; 4—Logs enter mill on conveyor belt; 5—Waste is burned in burner; 6—Piles of sawn lumber await shipment; 7—Lumber is shipped out by rail.



settlements become more and more remote and isolated. This is the Cariboo ranching country. Some farming is carried on. It is similar to the "Pioneer Fringe" of the Prairie Provinces. What are some of the problems faced by farmers in this area?

Barkerville booms again

In the summer holiday of 1963, 100,000 tourists travelled for 60 miles up a dirt sideroad in a lonely valley in the Cariboo Mountains. Abandoned mine workings line the creek that bubbles along the valley floor, because this was part of the famous Cariboo Road which led to Barkerville, the chief centre of the British Columbia Gold Rush. A hundred years ago gold seekers from all over the world travelled the old wagon road to the goldfields. To reach this goal, hidden deep in the mountains, they travelled for weeks by steamers, canoes, pack animals, stagecoaches, and even on foot. They endured many hardships and discomforts in the hope of a rich reward. Fifty million dollars worth of gold was taken from this area before the yields dropped, people moved away, and buildings fell into disrepair. Recently the Provincial Government decided to make this an historic park, in celebration of British Columbia's 100th birthday. Figure 9-36 is a scene in Barkerville today.

The spot where Billy Barker made his famous strike in 1862 is clearly marked today. Visitors may pan for gold in the creek themselves, but like most miners, they usually find only gravel. They may sample old fashioned sourdough bread from the bakery and look at the church, saloon, and other old buildings. Many enjoy the old time variety show in the "Theatre Royal."

At the end of the day the ride back to modern facilities at Quesnel sometimes seems very long. Visitors are glad that they are not making this

9-36. This old wooden church at Barkerville was built by miners in 1869 (British Columbia Government).





9-37. The Peace River area—wheatland of British Columbia (British Columbia Government).

long rough trip in the days when Barkerville was a thriving mining town. Why was the trip so difficult in the 1860's?

Gold is no longer a source of wealth to the Cariboo. Today it is loggers who are moving in and developing a thriving industry. Dense forest and rolling relief make logging easy. In Figure 9-1 locate Prince George, which is the main centre of the logging industry. Three pulp mills, a cement plant, an oil refinery, and thousands of commercial and residential buildings have been built since 1958. Prince George, which had 11,000 people in 1958 and 25,000 in 1967, is one of the fastest growing cities in Canada. Use an atlas or wall map to trace the many road and rail routes that meet at Prince George. Oil and gas pipelines pass through the town and provide power for local industries.

The Peace River District

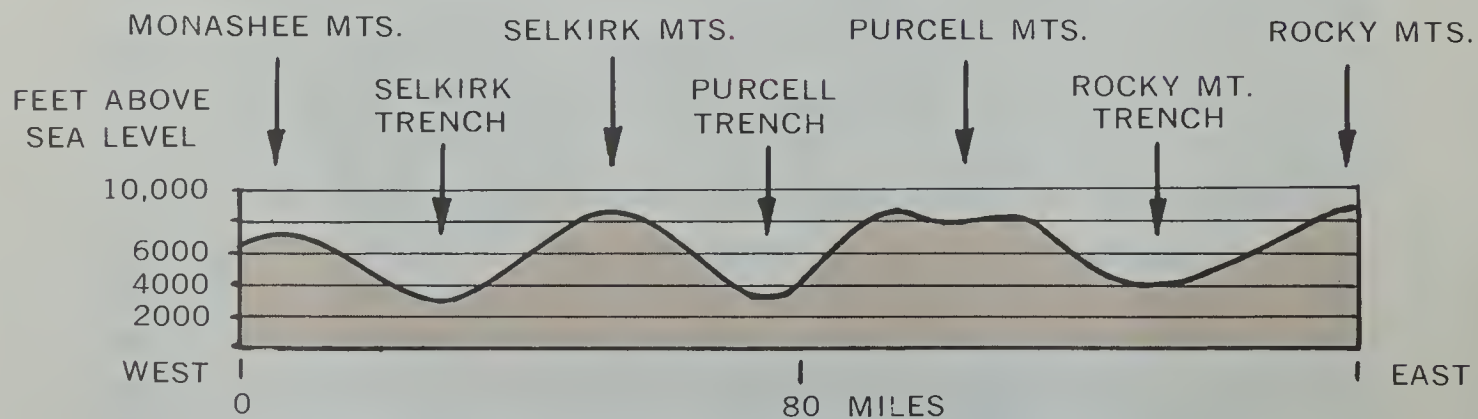
Danny Johnson lives in a trailer in Fort St. John. He was born and brought up in Kamloops, but his family moved north when Danny's father got a job surveying for the Peace River Project. Mr. Johnson worked on a dam which provides huge quantities of hydro-electricity. Thousands of others have moved into the towns in this area and accommodations are hard to obtain. Danny finds this a strange country. Look at the picture in Figure 9-37.



9-38. A blacktop link with the rest of Canada—The Trans-Canada Highway in Roger's Pass, British Columbia (British Columbia Government).



9-39. A bird's-eye view of the Purcell trench (National Film Board).



9-40 (Above). A section through the Kootenay Region of Southeastern British Columbia.



9-41. Snowsheds protect the highway from avalanches (British Columbia Government).

What are the differences between this area and that around Kamloops? The huge, flat wheatfields of the Peace River area are among the few places in British Columbia that are not too close to mountains. The climate is different too. From November until April the ground is frozen and temperatures are low. The January average in Fort St. John is 2°F. (Compare this with Hamilton.) The short summer is seldom hot but long hours of daylight assist the ripening of crops. Why are the summer days so long in the Peace River District?

Danny travelled to Fort St. John by road. On the way he saw five huge grain elevators by the track of the Pacific Great Eastern Railway at Dawson Creek. Where does the railway take the grain for export? He also saw oil wells and petrochemical plants near Taylor. The oil and gas is taken by pipeline to Vancouver.

In a letter to a friend Danny wrote, "I feel as if I'm living out on the prairie. It doesn't seem like British Columbia at all." Why did Danny feel this way?

Kootenay Region

MOUNTAIN WONDERLAND REVEALED

It opens up what must surely be some of the world's most impressive scenery . . . which until now has been accessible only from the Canadian Pacific Railway. . . . Leaving the little railroad city of Revelstoke (it) follows the swiftly flowing Illecillewaet River . . . through the avalanche sheds, past Flat Creek and Albert Canyon in Glacier National Park to Rogers Pass.

This is how the Vancouver *Sun* described the newly opened Rogers Pass section of the Trans-Canada Highway on July 28th, 1962. Figures 9-38 and 9-41 show two views of this highway. Figure 9-38 is typical of many parts of the Kootenays. Why is building roads in the area very costly? It cost 40 million dollars to build 92 miles of this highway. Why do you think four national parks and 26 provincial parks have been set aside in this area? What have you discovered about the climate? Avalanches are one of the greatest problems on this road, and snow sheds such as that shown in Figure 9-41 are one of several means of protecting travellers.

Southeastern British Columbia consists of a series of high mountain ranges separated by deep narrow valleys known as *trenches*. Figure 9-40 is a section through this country. At what approximate elevation are the floors of the trenches? Figure 9-39 shows part of the Purcell trench. What are the names of the mountain ranges on each side? How high are their summits according to Figure 9-40? Why do you think the agricultural land is confined to the valley floor? Often the valley floors are occupied by long, narrow lakes,



9-42. Abandoned buildings in the ghost town of Sandon (Vancouver *Sun*).

such as Kootenay Lake, so that no level land is available for agriculture. Logging and tourism are more important as sources of income.

A visit to a ghost town

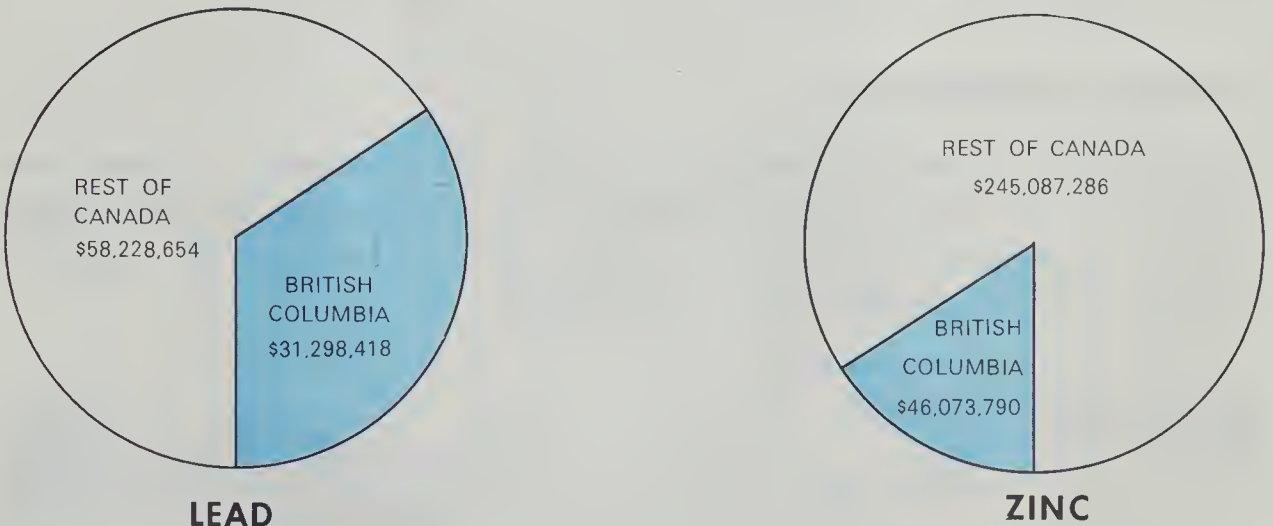
Mining has been important in the Kootenays for a hundred years, but many towns have declined or have been completely abandoned as the most valuable ores have been used up. These towns are known as *ghost towns*. Only two or three of the houses in Sandon are still occupied. The remainder are empty

9-43. Inside the Sullivan Mine at Kimberley (Cominco).



shells with doors swinging open and gaping holes for windows. Figure 9-42 is a picture of the main street today. The bustling business of the little town was carried on in the stores and saloons of the once busy street. Today only chipmunks scurry busily among the fallen timbers. To reach Sandon, one must drive for twenty-five miles along a rough gravel road up the valley. It is rare to see another person but there are many tumbledown structures from old mine workings. Sandon and other towns like it may boom again. The great demand for minerals by Japan has led to the reopening of several mines. One such mine near Grand Forks now produces 2,000 tons of copper concentrates a day for Japan, and the cemetery is the only thing that remains of the ghost town. Japan buys all the iron ore and nickel produced in British Columbia and almost all the copper. One group has already gone back to Sandon to work its silver-lead-zinc deposits.

Not all mining towns have declined. The Sullivan Mine at Kimberley is one of the largest lead-zinc mines in the world. Figure 9-43 is a scene inside the mine. How can you tell that this is a large and thriving enterprise? Gold,



9-44. British Columbia's role in lead and zinc production in Canada.

silver, copper, tungsten, gypsum, and iron are also produced by mines in the Kootenays.

Why did Trail become an important industrial city?

From the circle graphs in Figure 9-44, find out what proportion of Canada's lead and zinc production comes from British Columbia. Most of this comes from the great smelter at Trail. Locate Trail in Figure 9-1 and look at the photograph of the city in Figure 9-45. Which river flows past the smelter? In addition to metals, fertilizers and chemicals are produced by this huge industrial plant.

When Mary Hanna and her children disembarked from the sternwheeler *Lytton* in 1890, she saw nothing but trees on the small patch of flat land

beside the Columbia. She was the first white woman in Trail and her home was a tent in the forest. Later the family built a rough log cabin but four years later this home was washed away by floods. Typhoid fever killed her only son. Yet they stayed and built another house. This one had thirty rooms, with a dining room at one end and a saloon at the other. For by then Trail had become a boom town. The smelter had been opened and newcomers were pouring into the city. Today about 12,000 people live there.

Where does the ore that is processed here come from? It is brought in by rail. Why do you think vast quantities of hydro-electricity are available in this region? Several plants in the area supply the necessary power for the smelter and there are great undeveloped reserves on the Columbia and Kootenay rivers. Plans are being made for construction of three large dams. Co-operation between Canada and the United States is necessary since water on both sides of the boundary is involved. People who live in the Kootenays are concerned because farmland will be flooded. Why is agricultural land in this area so valuable? Coal is also available in the area and oil and gas are easily brought in from Alberta.

Reviewing the Kootenays

Imagine that you are the publicity agent for the Kootenays. Prepare two folders. One is designed to attract industries by emphasizing the advantages of this area for industrial development. The other is a tourist folder advertising the attractions of the area as a vacationland.

9-45. The smoking heart of Trail (Cominco).



British Columbia as a whole

1. Look back at the population map in Figure 9-2. Why is the population of the interior strung out in long lines?
2. What are British Columbia's chief products for export? Beside each item, write the name of the region where it is produced.
3. What forms of power are available to British Columbia?
4. What factors attract people to British Columbia from other provinces, especially from the Prairies?
5. Why is the title of this chapter a suitable one?
6. How does British Columbia differ from your home province?

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